Work Order ID 110391- SPLIT

December-18-13 8:59:20 AM

110391

Page 1

Item ID: D4634-1 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID:

Item Name: Fwd, Center Ceiling Panel **Stop** *NS2*

Start Date: 12/18/13 **Start Qty:** 2.00 *2*

Required Date: 12/31/13 **Req'd Qty:** 2.00 *2*

Reference:

Cust Item ID:

Customer:

Approvals: **Process Plan:** MCJ **Date:** 13-12-18 **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*

Stop *NR2*

Sequence ID / Work Center ID	Operation Description	Set Up / Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr D4634	**Revision Nbr** ~~E~~ PDF PIE	DAS 27 9-89 Rev E per ECN14-509							
100	HAND FINISHING THERMOFORMING	0.00				x2			GL 13/12/19
100									
Thermoform	**Memo**	0.00							
Thermeforming Machine	Cut Blanks								
105		0.00							
105	Dry Material					x2			GL 13/12/19
HandThermo	**Memo**	0.00							
Hand Finishing Thermoforming	Dry Sheet as per QSI022 POLYCARBONATE								

Temp: 345 °F

Time IN: 700 am 13/12/19

Time OUT: 700 am 13/12/19

Item ID: D4634-1 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: Fwd, Center Ceiling Panel
Start Date: 12/18/13 **Start Qty:** 2.00 *2*
Required Date: 12/31/13 **Req'd Qty:** 2.00 *2*
Reference:
Cust Item ID:
Customer:

Run Start *NR1*
Stop *NR2*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110		0.00							
110	THERMOFORMING MACHINE					x 2			DL 13/12/13
Thermoform	**Memo**	0.00							
Thermoforming Machine	Thermoform as per Dwg. D4634-1 and Folio FTA144								
	Dwg. Rev. D-01								
	Folio Rev. D								
	Visually inspect for proper formation and texture								
130		0.00				1			~~BB~~ 14/01/12
130	HAND FINISHING THERMOFORMING								~~BB~~ 13/12/22
Thermoform	**Memo**	0.00							
Thermoforming Machine	Trim to Finished Dimensions								
140	QC2- Inspect parts off machine FAI/FAIB	0.00				x			DL 14/01/15
140						1			~~BB~~ 13/12/27
QC	**Memo**	0.00							
Quality Control	N/A DAS 27 9-89 14/1/16								

Item ID: D4634-1 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: Fwd, Center Ceiling Panel

Start Date: 12/18/13 **Start Qty:** 2.00 *2*
Required Date: 12/31/13 **Req'd Qty:** 2.00 *2*
Reference:

Cust Item ID:
Customer:

Run Start *NR1*
Stop *NR2*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 *150* QC Quality Control	QC5- Inspect part completeness to step on WO	0.00				1			
	Memo	0.00 DAS 27 9-89 14/1/16				Inspect as per Rev F01			
160 *160* Packaging Packaging	Packaging	0.00				(1) SAD 14/01/17			
	Memo	0.00 USE ON W/O 111148							
170 *170* QC Quality Control	QC21- Final Inspection - Work Order Release	0.00				MLJ 1401-23			
	Memo	0.00							

RD4397A

POSITIVE RECALL EFFECTIVE 12.18 AUTH
RELEASED _____ DATE _____

POSITIVE RECALL EFFECTIVE 14.01.22 AUTH
RELEASED _____ DATE _____

Release Dwg Rev E 14/1/23

DAS 27 9-89

MF 14-1-17

Picklist Print

December-18-13 8:49:32 AM

Work Order ID: 110391 *1110391*

Parent Item: D4634-1 *D4634-1*

Parent Item Name: Fwd, Center Ceiling Panel

Start Date: 12/18/13 **Required Date:** 12/31/13

Start Qty: 2.00 **Required Qty:** 2.00

Comments: IPP Rev.A New Issue 12/05/07 DL VERIFIED BY:JLM IPP Rev. B Dwg. Update 13/07/09 DL verf:DD IPP Rev C Dwg Update, Material Change 13/12/18 DL

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MLEXS.093-F6006-07		Purchased	No			100	sf	1,838.000	12.93	31			
MLEXS.093-F6006-07									**			31 13/12/13	

GE PLASTICS LEXAN SHEET

Location	Loc Qty	Loc Code	
MAT023	2067.26		
114459	229.26		
123105	38		
124501	1800		

DART AEROSPACE LTD	Work Order:	110391
		D4634-1
Description:	Part Number:	
Inspection Dwg: D4634 Rev: PE1		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

THERMOFORMING SECTION

Description	Accept	Reject	Method of Inspection	Comments
Inside Radii less than N/A "				
Shape Definition	✓			
Texture Retention	✓			
Material imperfections such as bumps, cracks, voids, scratching	✓			

Measured by:		Date:	14/01/15

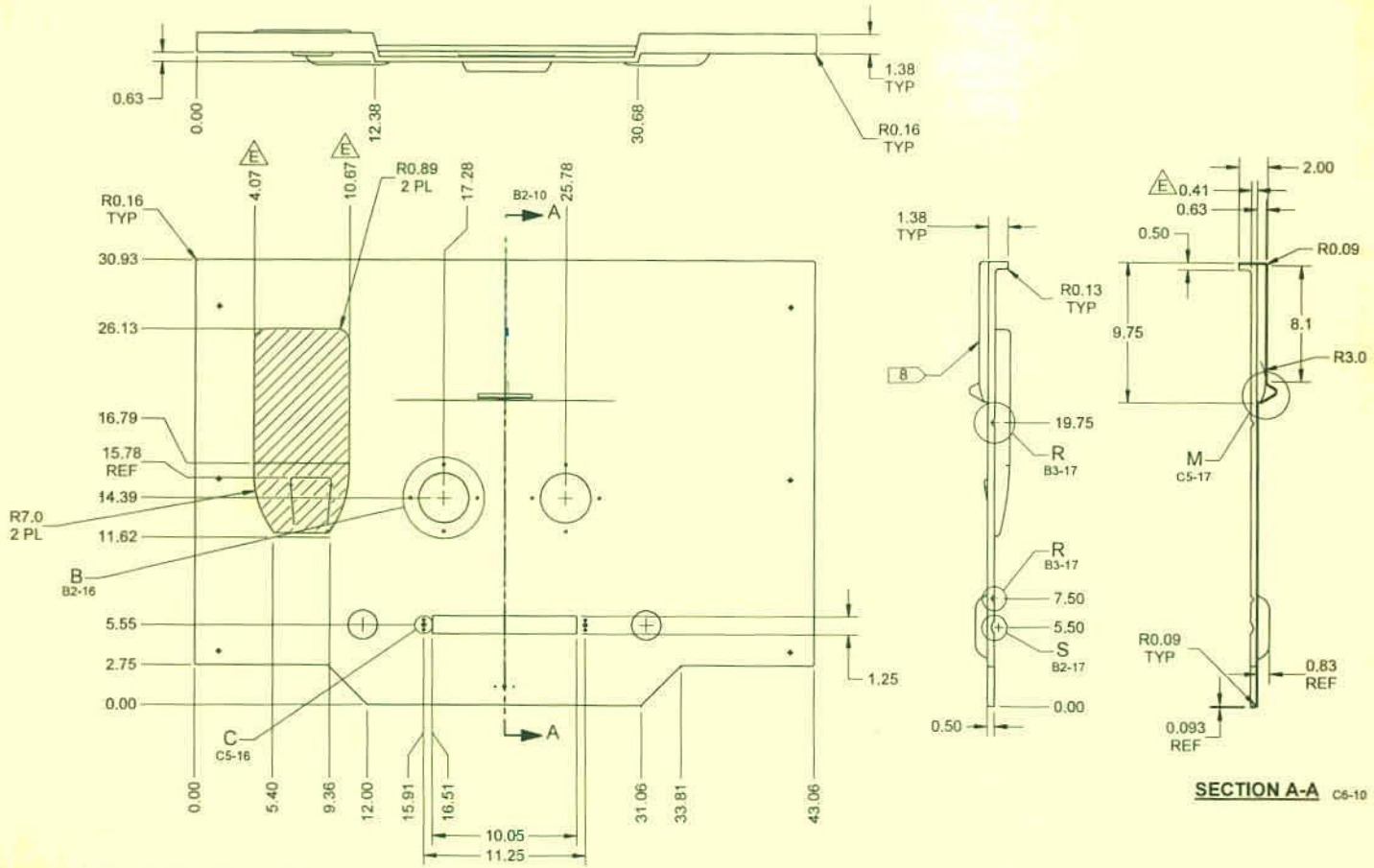
TRIMMING SECTION

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
43.06 "		43.06 "	✓		TAPE DL-01	
30.93 "		30.93 "	✓		TAPE DL-01	
0.050"		0.055"	✓		Vern TH-01	
1.38"		1.39"	✓		Vern TH-01	
Ø 3.50"		3.52"	✓		Vern TH-01	
10.05"		10.05"	✓		TAPE DL-01	
Ø 2.00"		2.00"	✓		Vern TH-01	
1.25"		1.22"	✓		Vern TH-01	
Ø 0.25"		0.25"	✓		Vern TH-01	

Measured by:	DAS 27 9-89	Date:	14/01/15
Audited by:		Date:	14/1/15
Preliminary Approval:		Date:	

Rev	Date	Change	Revised by	Approved
B	10.04.14	Added preliminary approval	KJ	

10.04.14

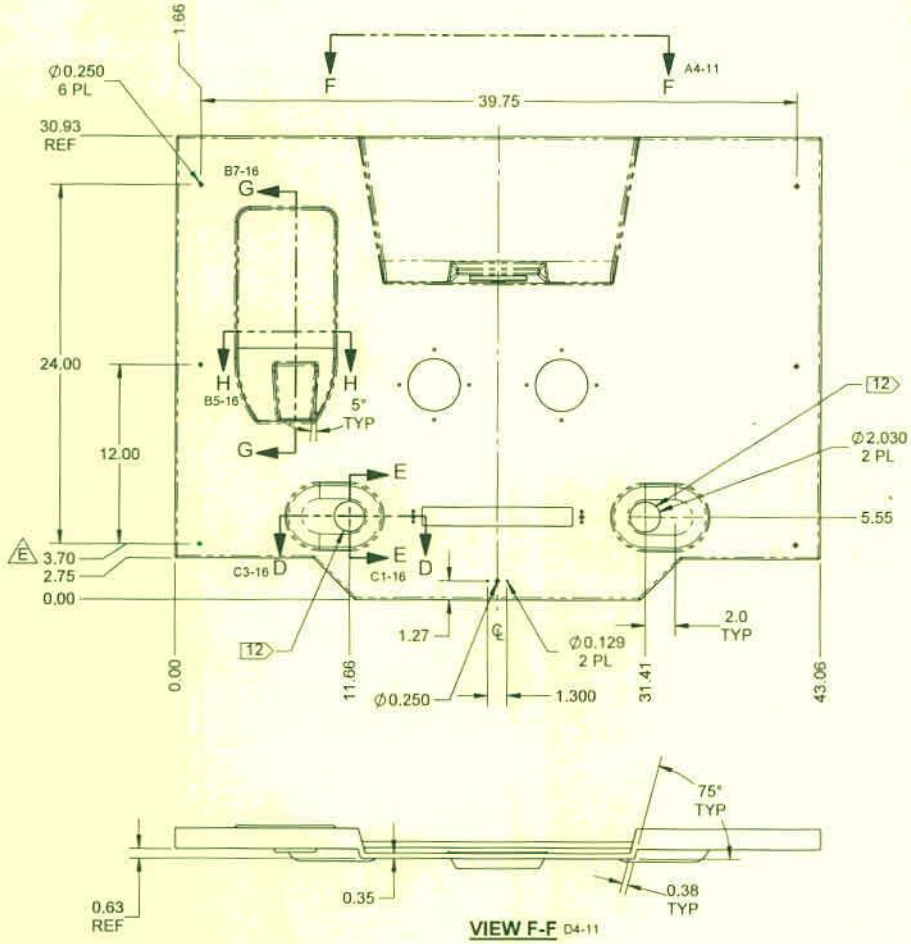


SECTION A-A C6-10

NOTES:
1) MATERIAL: F6006 SUEDE/POLISHED GY5B133 LIGHT GREY LEXAN SHEET 0.093 THICK (REF DART SPEC MLEXS.093-F6006-07)
2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 5.65 lbs
8) TEXTURE ON THIS SIDE
9) 0.14 RADIUS NOT SHOWN FOR CLARITY
10) DRILL & TRIM D4634-1 PER TOOL DT9836
11) THERMOFORM PER QSI 022 USING DT9844 TOOL
    MIN. THICKNESS AFTER FORMING:
    SHADED AREA = 0.020
    EDGES = 0.060
    ELSEWHERE = 0.070
12) LOCATE Ø2.030 AT CENTER OF PROTRUDED SURFACE AS SHOWN

D4634-1 FWD, CENTER CEILING PANEL

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED	SC	DRAWING NO. D4634 REV. PE1 SHEET 10 OF 17
MFG. APPR.		
APPROVED		TITLE CENTER CEILING PANELS SCALE NTS
DE APPR.		
DATE	14.01.09	COPYRIGHT © 2012 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

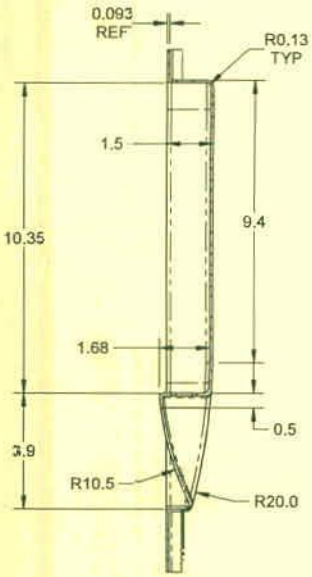


VIEW F-F D4-11

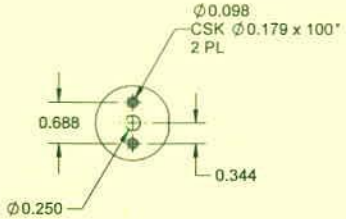
D4634-1 FWD. CENTER CEILING PANEL
AUXILIARY VIEW

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED	BC	DRAWING NO. D4634 REV. PE1 SHEET 11 OF 17
MFG. APPR.		
APPROVED		TITLE CENTER CEILING PANELS SCALE NTS
DE APPR.		
DATE 14.01.09		

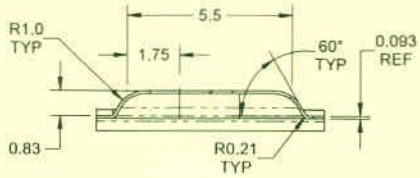
COPYRIGHT © 2012 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



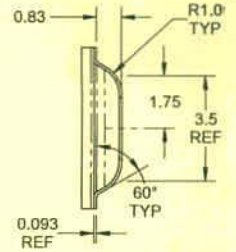
SECTION G-G C5-11
SCALE 4X



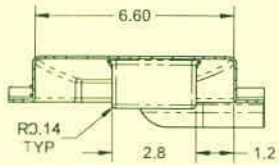
DETAIL C B7-10 B4-12 B4-14
SCALE 4X



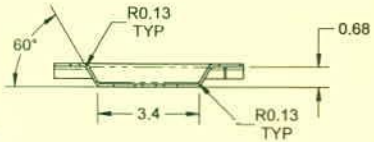
SECTION D-D B6-11 C4-13 C4-15
SCALE 2X



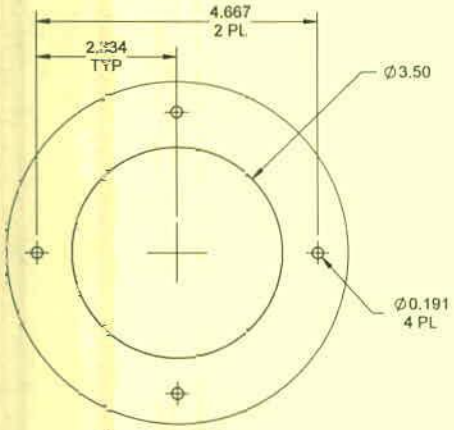
SECTION E-E B5-11 C4-13 C5-15
SCALE 4X



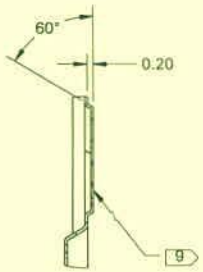
SECTION H-H C5-11
SCALE 2X



SECTION J-J B6-13
SCALE 2X



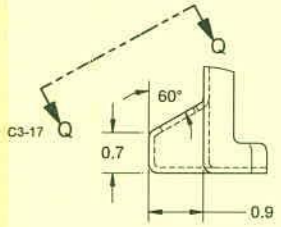
DETAIL B B7-10
SCALE 4X
2 PL



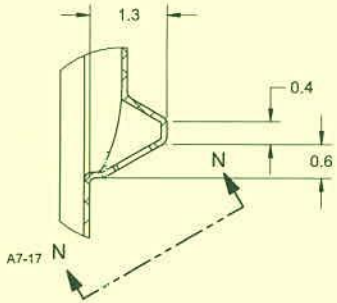
DETAIL L B2-13 C2-13 B2-14 C2-14
SCALE 4X
TYP

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	BC	DRAWING NO.	REV. PE1
MFG. APPR.		D4634	SHEET 16 OF 17
APPROVED		TITLE	SCALE
DE APPR.		CENTER CEILING PANELS	NTS
DATE	14.01.09		

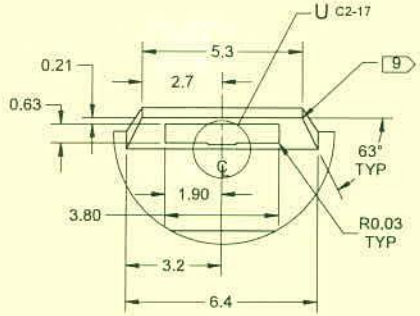
COPYRIGHT © 2012 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



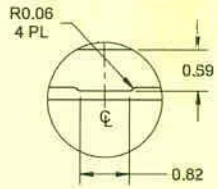
DETAIL P B3-14
SCALE 2X



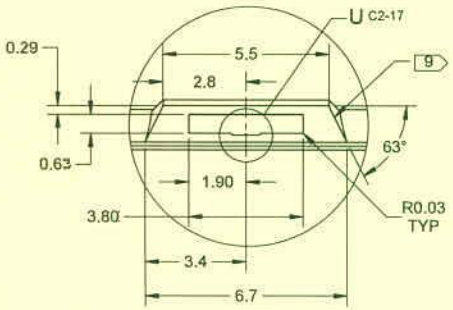
DETAIL M C3-10
SCALE 2X



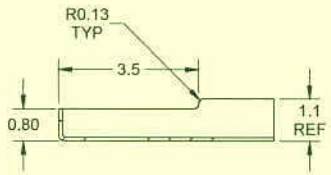
DETAIL Q B4-15 D8-17
SCALE 0.5X



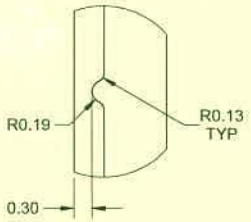
DETAIL U B7-17 D3-17
SCALE 0.5X



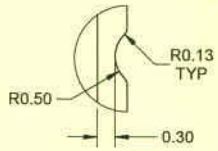
DETAIL N C5-17 B4-15
SCALE 0.5X



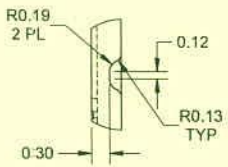
SECTION O-O B6-14
SCALE 1.3X



DETAIL R B3-10 C3-10 B2-12
SCALE 4X



DETAIL S B3-10 C2-12
SCALE 4X



DETAIL T C2-14
SCALE 4X

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED	DC	DRAWING NO. REV. PE1
MFG. APPR.		D4634 SHEET 17 OF 17
APPROVED		TITLE SCALE
DE APPR.		CENTER CEILING PANELS NTS
DATE	14.01.09	

COPYRIGHT © 2012 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

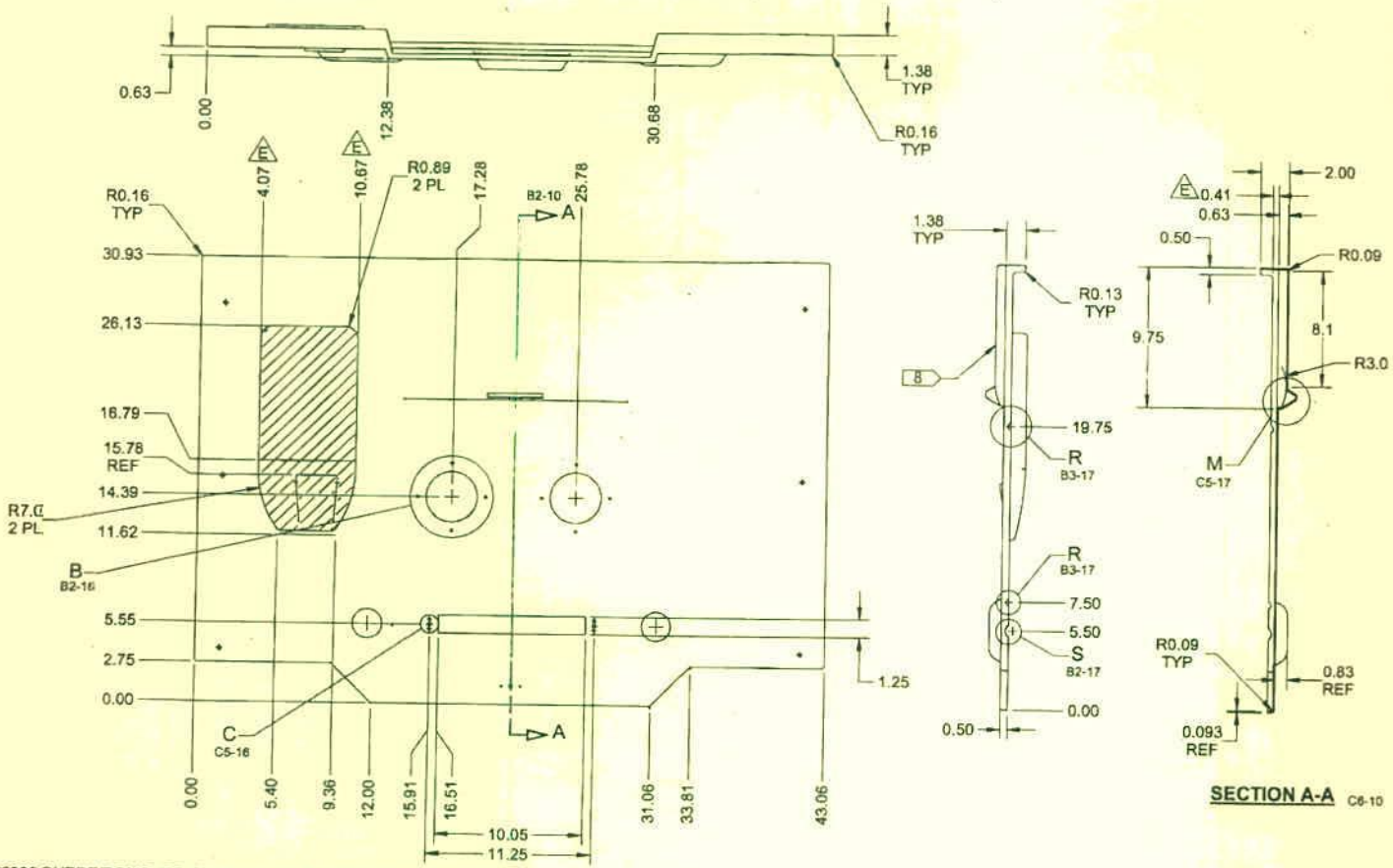
DART AEROSPACE LTD

Description:	Fwd Carbon Ceiling Panel	Work Order:	B110391
Inspection Drawing:	D4634	Rev: PE1	Part Number: D4634-1

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
2.75	+/- 0.03	2.75	✓			
5.55	"	5.55	✓			
11.62	"	11.65	✓			
26.13	"	26.10	✓			
30.93	"	30.93	✓			
4.07	"	4.07	✓			
10.67	"	10.67	✓			
17.28	"	17.30	✓			
25.78	"	25.80	✓			
43.06	"	43.06	✓			
11.25	"	11.25	✓			
10.05	"	10.05	✓			
1.25	"	1.25	✓			
1.38	"	1.40	✓			
12.38	"	12.38	✓			
30.68	"	30.70	✓			
2.00	"	2.00	✓			
3.90	"	3.94	✓			
1.90	"	1.91	✓			
2.50	"	2.51	✓			
6.60	"	6.61	✓			
10.35	"	10.35	✓			
3.80	"	3.77	✓			
0.63	"	0.618	✓			

Measured by: DAS 27 9-89	Checked By:	QC inspector:	Engineering Approval (*if necessary*):
Date 14/1/16	Date	Date	Date



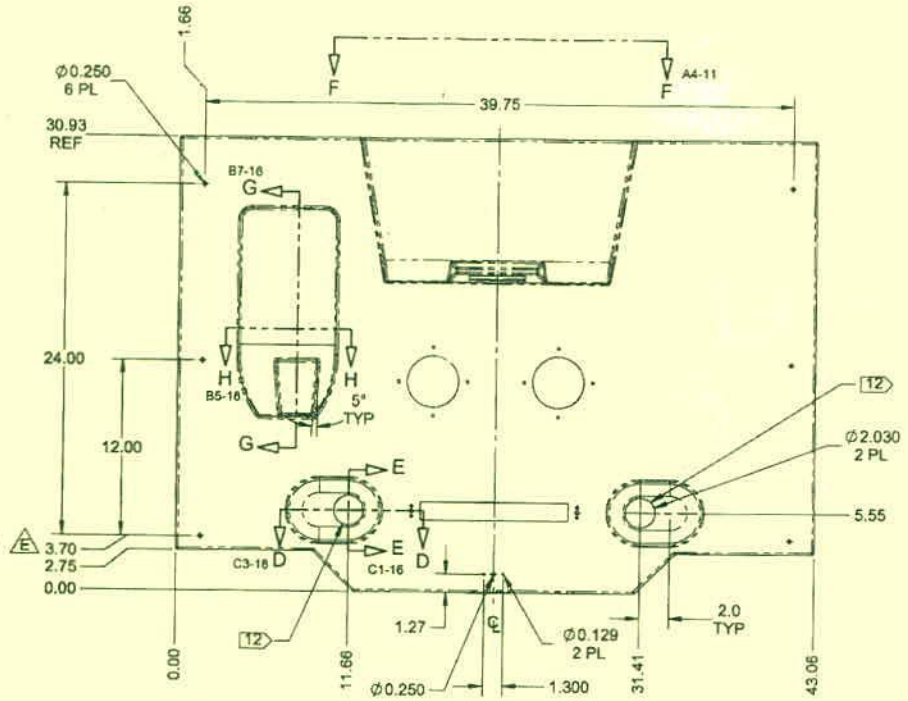
SECTION A-A C6-10

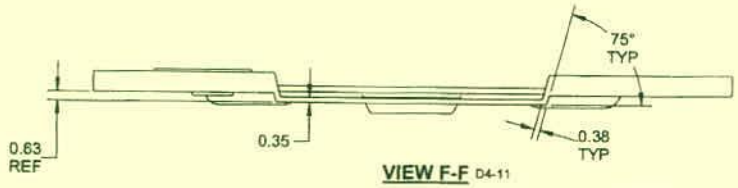
NOTES:
1) MATERIAL: F6006 SUEDE/POLISHED GY5B133 LIGHT GREY LEXAN SHEET 0.093 THICK (REF DART SPEC MLEXS.093-F6006-07)
2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 5.65 lbs
8) TEXTURE ON THIS SIDE
9) 0.14 RADIUS NOT SHOWN FOR CLARITY
10) DRILL & TRIM D4634-1 PER TOOL DT9836
11) THERMOFORM PER QSI 022 USING DT9844 TOOL
MIN. THICKNESS AFTER FORMING:
SHADED AREA = 0.020
EDGES = 0.060
ELSEWHERE = 0.070
12) LOCATE Ø2.030 AT CENTER OF PROTRUDED SURFACE AS SHOWN

D4634-1 FWD, CENTER CEILING PANEL

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED	PC	DRAWING NO. D4634 REV. E
MFG. APPR.		SHEET 10 OF 17
APPROVED		TITLE CENTER CEILING PANELS SCALE NTS
DE APPR.		
DATE	14.01.09	

COPYRIGHT © 2012 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

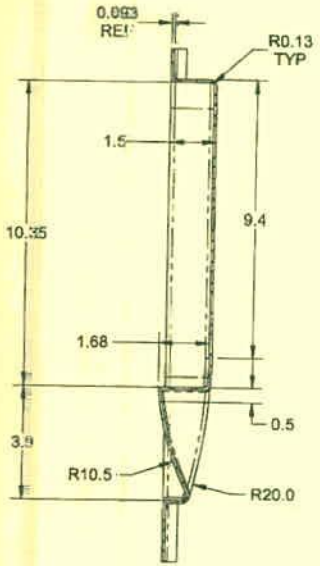




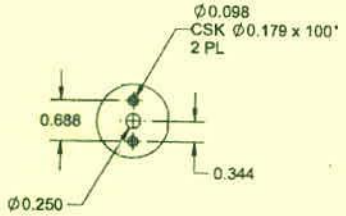
VIEW F-F D4-11

D4634-1 FWD. CENTER CEILING PANEL
AUXILIARY VIEW

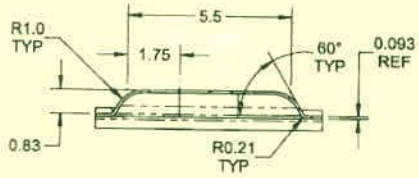
DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED	BC	DRAWING NO. D4634 REV. E
MFG. APPR.		SHEET 11 OF 17
APPROVED		TITLE CENTER CEILING PANELS SCALE NTS
DE APPR.		
DATE 14.01.09		COPYRIGHT © 2012 BY DART AEROSPACE LTD. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



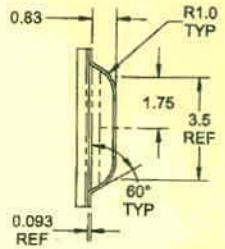
SECTION G-G C5-11
SCALE 4X



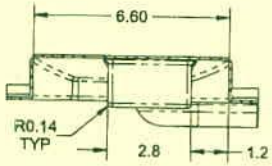
DETAIL C B7-10 B4-12 B4-14
SCALE 4X



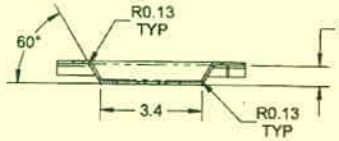
SECTION D-D B6-11 C4-13 C4-15
SCALE 2X



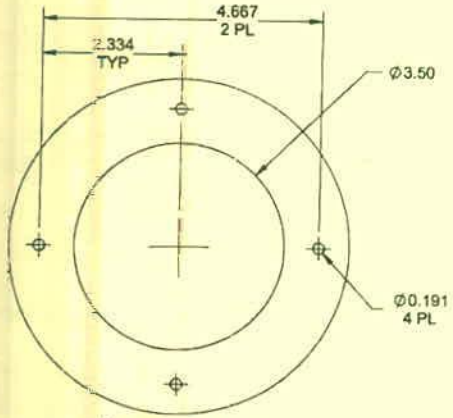
SECTION E-E B5-11 C4-13 C5-15
SCALE 4X



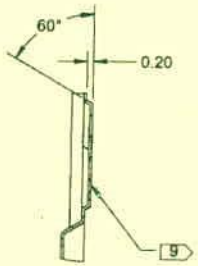
SECTION H-H C5-11
SCALE 2X



SECTION J-J B6-13
SCALE 2X



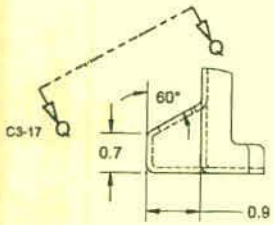
E DETAIL B B7-10
SCALE 4X
2 PL



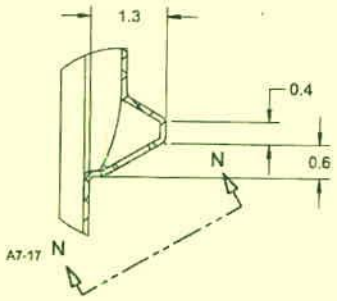
DETAIL L B2-13 C2-13 B2-14 C2-14
SCALE 4X
TYP

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED	DC	DRAWING NO. REV. E
MFG. APPR.		D4634 SHEET 16 OF 17
APPROVED		TITLE SCALE
DE APPR.		CENTER CEILING PANELS NTS
DATE	14.01.09	

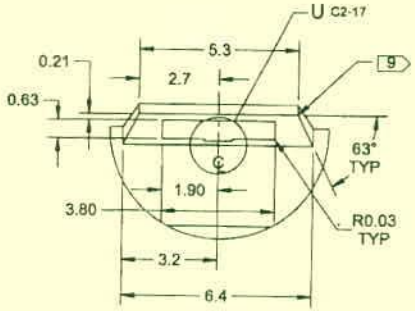
COPYRIGHT © 2012 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR DISCLOSED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



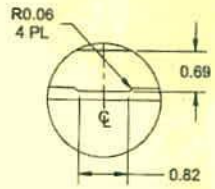
DETAIL P B3-14
SCALE 2X



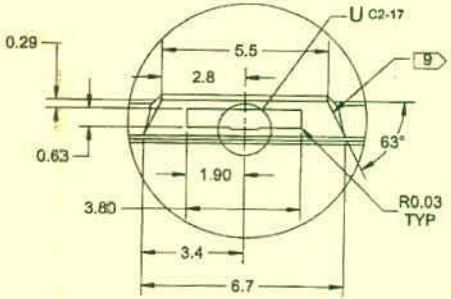
DETAIL M C3-10
SCALE 2X



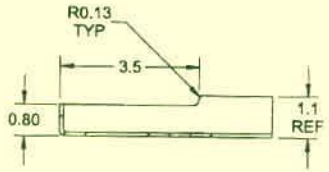
DETAIL Q B4-15 D8-17
SCALE 0.5X



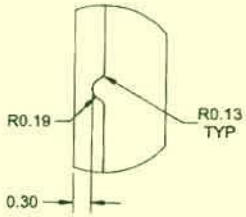
DETAIL U B7-17 D3-17
SCALE 0.5X



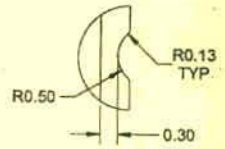
DETAIL N C5-17 B4-15
SCALE 0.5X



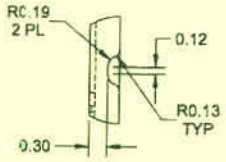
SECTION O-O B6-14
SCALE 1.3X



DETAIL R B3-10 C3-10 B2-12
SCALE 4X



DETAIL S B3-10 C2-12
SCALE 4X



DETAIL T C2-14
SCALE 4X

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED	BC	DRAWING NO. D4634 REV. E
MFG. APPR.		SHEET 17 OF 17
APPROVED		TITLE CENTER CEILING PANELS SCALE NTS
DE APPR.		
DATE	14.01.09	

COPYRIGHT © 2012 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR DISSEMINATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.